SEQUENCE LISTING

<110> Arizona Board of Regents, on behalf of Arizona Sta

<120> COMPOSITION AND METHOD FOR ENHANCING IMMUNE RESPONSE

<130> 130588.91361

<140> FILED HEREWITH
<141> 2003-03-06

<150> 60/362,247
<151> 2002-03-06

<160> 9

<170> PatentIn Ver. 2.1

<210> 1
<211> 35
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<221> PEPTIDE
<222> (1)..(35)
<223> HIV-1 gp41 peptide portion (residues 650-685)

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Ser Gln Thr Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp
1 5 10 15

Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp
20 25 30

Tyr Ile Lys
35

<210> 2
<211> 6
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<221> PEPTIDE
<222> (1)..(6)
<223> HIV-1 gp41 peptide portion (residues 663-668)

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Glu Leu Asp Lys Trp Ala
1 5

<210> 3
<211> 36
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<213> Human immunodeficiency virus type 1

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Cys Ser Gln Thr Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu
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Asp Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu
20 25 30

Trp Tyr Ile Lys
35

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<212> PRT
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<220>
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<223> HIV-1 isolate MN clone V5 (residues 649-685)

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Ser Gln Thr Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Gly Leu Asp
1 5 10 15

Lys Trp Glu Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp
20 25 30

Tyr Ile Lys Ile
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<210> 5
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<212> PRT
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<222> (1)..(36)
<223> HIV-1 isolate 593 clone (residues 649-685)

<400> 5
Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp
1 5 10 15

Lys Trp Ala Gly Leu Trp Asn Trp Phe Glu Ile Thr Asn Trp Leu Trp
20 25 30

Tyr Ile Lys Ile
35

<210> 6
<211> 36
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
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<222> (1)..(36)
<223> HIV-1 isolate 98BRRS012 (residues 649-685)

<400> 6
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1 5 10 15

Lys Trp Ala Asn Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp
20 25 30

Tyr Ile Lys Ile
35

<210> 7
<211> 36
<212> PRT
<213> Human immunodeficiency virus type 1

<220>
<221> PEPTIDE
<222> (1)..(36)
<223> HIV-1 isolate 19242v3.20 (residues 649-685)

<400> 7

Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Asp Leu Leu Glu Leu Asp
1 5 10 15

Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Ser Asn Trp Leu Trp
20 25 30

Tyr Ile Lys Ile
35

<210> 8
<211> 522
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: CTB-P1 FUSION GENE

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cacatggcac cccacaaaac atcactgact tgtgtgctga gtaccacaac acccaaatcc 120
acaaccctca atgacaagat ctttagctac accgagagcc ttgctggcaa gagggagatg 180
gctatcatcc cttcaagaat ggtgctacct tccaagtgga ggtgcctgga agccaacaca 240
ttgatagcca aaagaaggcc attgagagga tgaaggacac attaggatag cttacctcac 300
tgaggctaag gtggagaagc tttgtgtgtg gaacaacaag actccacatg ctattgctgc 360
cattagcatg gcaaatggtc ctggaccttc ccaaacccaa caagagaaga atgagcaaga 420
gcttttggag ttggacaagt ggcaagcctt tggaattggt ttgacatcac caattggctt 480
tggtatatca agatctctga gaaggatgaa ctctaagagc tc 522

<210> 9
<211> 171
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: CTB-P1 FUSION PROTEIN

<400> 9
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1 5 10 15

Ser Ala Tyr Ala His Gly Thr Pro Gln Asn Ile Thr Asp Leu Cys Ala
20 25 30

Glu Tyr His Asn Thr Gln Ile His Thr Leu Asn Asp Lys Ile Phe Ser

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Tyr Thr Glu Ser Leu Ala Gly Lys Arg Glu Met Ala Ile Ile Thr Phe
     50                  55                  60

Lys Asn Gly Ala Thr Phe Gln Val Glu Val Pro Gly Ser Gln His Ile
 65                  70                  75                  80

Asp Ser Gln Lys Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile
                 85                  90                  95

Ala Tyr Leu Thr Glu Ala Lys Val Glu Lys Leu Cys Val Trp Asn Asn
            100                 105                 110

Lys Thr Pro His Ala Ile Ala Ala Ile Ser Met Ala Asn Gly Pro Gly
        115                 120                 125

Pro Ser Gln Thr Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu
    130                 135                 140

Asp Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu
145                 150                 155                 160

Trp Tyr Ile Lys Ile Ser Glu Lys Asp Glu Leu
                165                 170
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